

REMARKS/ARGUMENTS

Claims 1-11, 13, 15, 16, 18-30, 32, and 34-43 are pending in this Application. Claims 24-30, 32, and 34-40 are withdrawn from consideration. By this Amendment, claims 1, 24, 40 and 41 are amended. The amendments introduce no new matter. Claims 12, 14, 31, and 33 are canceled without prejudice to, or disclaimer of, the subject matter recited in these claims. Reconsideration of the application based on the above amendments and the following remarks is respectfully requested.

Entry of the amendments is proper under 37 CFR §1.116 since the amendments: (a) place the application in condition for allowance for the reasons discussed herein; (b) do not raise any new issue requiring further search and/or consideration because the amendments relate to matters of form or are to incorporate features of dependent claims; (c) satisfy a requirement of form asserted in the previous Office Action; and (d) place the application in better form for appeal, should an appeal be necessary. The amendments are necessary and were not earlier presented because they are made in response to arguments raised in the final rejection. Entry of the amendments is thus respectfully requested

Withdrawn Claims

Applicants respectfully request rejoinder of withdrawn claims 24-30, 32, and 34-40 under MPEP §821.04 upon allowance of claims 41 for at least the reason that claim 24 otherwise requires all of the limitations recited in claim 41.

Claims Objections

The Office Action objects to claims 1 and 41. These claims are amended in accordance with the Examiner's suggestion. Accordingly, withdrawal of the objection is respectfully requested.

Rejections Under 35 U.S.C. §112

The Office Action rejects claims 1-23 and 43 under 35 U.S.C. §112. This rejection is respectfully traversed.

The Office Action asserts that the feature of "based on the signal from only a single sensor module" is not supported by the original disclosure because there is allegedly no statement that the gait characteristics are "based on the signal from only a single sensor module". However, as discussed at least on pages 11-12 of Applicants' disclosure as filed, Figures 3(A) and 3(B) depict an embodiment of the present invention as an acceleration, vibration and/or deflection module 32 that may detect floor acceleration, vibration and/or deflection to provide an acceleration, vibration and/or deflection signal. A signal, as provided by the single sensor depicted in Figures 3(A) and 3(B), is depicted in Figures 3(C) and 3(D). As also described on pages 8-9 of Applicants' disclosure as filed, the sensing unit on module 32, depicted in Figure 1, is described as a single module, not a plurality of modules. A processor module 40 may be provided that analyzes the acceleration, vibration and/or deflection signal for determining gait characteristics data obtained by the sensor module 32.

As such, Applicants' disclosure supports a processor module, such as processor module 40 relying on the signals from a single vibration, deflection and/or acceleration sensor module, such as, for example, module 32 depicted in Figure 1 and Figures 3(A) and 3(B).

Although exemplary systems may further include a rate of travel detector to determine a rate of travel of the subject, this is not required in all embodiments, and is not required to determine, for example, step count, pace, normal gait condition, limp, shuffle, and falls, as described on page 14 of Applicants' disclosure, as filed. The addition of a rate of travel detector, may provide additional functionality such that average walking velocity, step length

and stride length may be determined. Claims 12 and 31 have been canceled to eliminate any ambiguity regarding the functionality of the processor module being configured to determine gait characteristics based on the at least one signal from only a single sensor module. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. §112 are respectfully requested.

Rejections Under 35 U.S.C. §102

The Office Action rejects claims 1-9, 12-16, 18-23, 42 and 43 under 35 U.S.C. §102(e) over U.S. Patent Application Publication No.2002/0107649 to Takiguchi et al. (hereinafter “Takiguchi”). This rejection is respectfully traversed. The Office Action asserts that Takiguchi allegedly teaches a sensor module configured to touch an upper surface of a floor. In this regard, the Office Action states that “the limitation configured to touch an upper surface a floor has been interpreted to mean capable of touching an upper surface of a floor in light of Applicants’ amendment deleting touching.” This analysis is incorrect.

Applicant is not required to recite that the sensor is actually touching an upper surface of a floor in order to give these features patentable weight. In fact, this would be an unreasonable limitation to insist upon for a product that is presumably packaged, and not “touching an upper surface of a floor” until the product is in use. Rather, the limitation that the sensor is configured to touch an upper surface of a floor, is a recognized manner of phrasing structural limitations, and is clearly described in Applicants’ disclosure. Such terms would be readily understood by one of ordinary skill in the art as a part of a gait monitoring system that is structurally configured to touch an upper surface of a floor. The allegedly corresponding watch and cellular phone depicted in Figure 19(A) and 19(B) of Takiguchi clearly do not satisfy this feature. On the contrary, Takiguchi characterizes its own invention as “a device to be placed on the body of of a user or on the clothes the user is wearing.” Paragraph [0027] of Takiguchi.

Takiguchi does not describe, nor would one of ordinary skill in the art interpret either of a watch or a cell phone as a sensor configured to touch the floor surface, as recited in claim 42, or a sensor module configured to touch an upper surface of a floor, as recited in claim

1. Of note, Takiguchi does not discuss, for example, the microphone 10 in any way that would reasonably suggest the microphone 10 as touching a floor surface, particularly not when any corresponding “housing” is placed on the floor surface in a freestanding position. The interpretation of the Office Action is improper and inconsistent with the guidance that the Patent Office must apply the broadest reasonable interpretation in light of the disclosure and the understanding of one of ordinary skill in the art.

With respect to claim 14, aspects of which have been amended into claim 1, the Office Action asserts that frequency graphs depicted in Figures 2-5 of Takiguchi allegedly disclose a processor configured to distinguish between steps of a human being and a fall of a human being. In this regard, the Office Action states that “these frequency graphs would distinguish between steps and a fall in the sense that the data from the two occurrences would be displayed differently.” This analysis is incorrect.

Merely displaying a frequency spectrum of sound vibrations does not teach the feature of a processor configured to distinguish between steps of the human being and a fall of the human being, as now recited in claim 1. Takiguchi contains no disclosed configuration of a processor to distinguish between the recited steps of the human being and a fall of the human being.

The Office Action also asserts that “alternatively, walking down stairs is a controlled fall and is distinguished from regular steps.” This assertion is also incorrect. The claims do not recite “a controlled fall” and walking down stairs would not be interpreted as corresponding to “a fall of a human being” as recited in the claims, and discussed in Applicants’ disclosure. Applicants submit that one of ordinary skill in the art would understand that the fall of a human being is associated with leaving an erect position suddenly and involuntarily, and, as discussed in Applicants’ disclosure, is a hazardous situation that may require alerting care providers. Walking down stairs would not be interpreted as corresponding to “a fall of a human being”, in light of Applicants’ disclosure and the ordinary and customary meaning of these terms.

With regard to claim 21, the Office Action again asserts that the frequency spectrum displayed in Takiguchi corresponds to a fall module configured to recognize data that is consistent with the fall of the human body. The Office Action asserts that the analyzer “clearly recognizes this data in the sense that it inputs it and converts it to a frequency spectrum which is output.” This interpretation is unreasonable in light of the ordinary and customary meaning of what it means to “recognize data that is consistent” with something. The Takiguchi system does not acknowledge an acquaintance with, or recognize that the data as consistent with, the fall of the human body. Again, the Office Action applies an unreasonable an interpretation that would effectively render the recited claim feature meaningless in the context of the claim as a whole.

The Office Action also asserts that the frequency spectrum “itself is a notification of a fall if it displays the information from a fall.” Applicants respectfully disagree with this interpretation and submit that merely displaying a frequency spectrum does not correspond to providing a notification of a fall based on any recognized data.

Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

Rejections Under 35 U.S.C. §103

The Office Action rejects claim 10 under 35 U.S.C. §103(a) over Takiguchi in view of U.S. Patent No. 6,006,165 to Okada (hereinafter “Okada”), rejects claim 11 under 35 U.S.C. §103(a) over Takiguchi in view of U.S. Patent No. 5,831,937 to Weir et al. (hereinafter “Weir”), rejects claim 41 under U.S.C. §103(a) over Takiguchi in view of U.S. Patent No. 5,081,297 to Lebel et al. (hereinafter “Lebel”) and rejects claims 1-4, 7-9, 12, 13, 15, 16 and 19-23 under 35 U.S. C. 103(a) over U.S. Patent No. 4,110,730 to Varecka et al. (hereinafter “Varecka” in view of U.S. Patent No. 4,214,485 to Berger (hereinafter “Berger”). These rejections are respectfully traversed.

With respect to claim 1, as amended, the combination of Varecka as modified by Berger, would not have reasonably suggested at least the features of the processor is configured to distinguish between steps of a human being and a fall of a human being. This is apparently conceded by the Office Action as claim 14 was not rejected over these references.

Claim 41 is also believed to be allowable over Takiguchi in view of Lebel for at least the above-described shortfalls in the application of Takiguchi with respect to the claimed analyzing further including distinguishing between steps of a human being and a fall of a human being. Lebel is not applied in a manner to overcome these deficiencies.

Regarding claim 21, the Office Action asserts that “a step is a fall of a human body, as it is the human’s weight being transferred to the ground against gravity.” Applicants respectfully disagree.

One of ordinary skill in the art would understand the difference between a step of a human being and a fall of a human body. The Office Action’s interpretation of a step as a fall of a human body is contrary to the ordinary and customary meaning of these terms, even without referring to Applicants’ disclosure.

Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

The remaining claims are likewise allowable for at least the respective dependence of these claims, directly or indirectly, on an allowable base claim, as well as for the separately patentable subject matter that each of these claims recites.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 202-481-9900.

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Amendment under 37 CFR 1.116 Expedited Procedure
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The Commissioner is authorized to charge any fees due or credit any overpayment to the Deposit Account of Townsend and Townsend and Crew LLP, Deposit Account No. 20-1430.

Respectfully submitted,

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